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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kaoru Kagami

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7761

7590

05/18/2004

Vincent O. Wagner

Woodard, Emhardt, Naughton, Moriarty and McNett

Bank One Center/Tower

111 Monument Circle, Suite 3700

Indianapolis, IN 46204-5137

EXAMINER

LE, THANH TAM T

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/901,307	KAGAMI ET AL.	
	Examiner	Art Unit	
	Thanh-Tam T. Le	2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-19, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-19, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/26/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1-2, 9 and 16-17 are objected to because of the following informalities:

Claim 1, line 12 and claim 16, line 12, "said lens" lacks an antecedent basis.

Claim 2, line 2 and claim 17, line 2, "a lens" should be changed -- said lens --.

Claim 9, line 2, "a through hole" should be changed -- the through hole --.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-9, 11-18 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant submitted Prior Art (APA) in view of Zhu et al. (6,404,954).

Regarding claims 1, 5-6, 11-12, 14-16 and 21, APA, figure 20, discloses an optical signal separating device comprising a plurality of optical multi/demultiplexers, each of the optical multi/demultiplexers comprising:

- an wavelength selection filter (95) for selectively transmitting light of a certain wavelength range and reflecting light of other wavelength ranges;

Art Unit: 2839

- a first optical system (110) having an optical fiber (111) for guiding light to be transferred to the wavelength selection filter from the wavelength selection filter;
- a second optical system (100) having an optical fiber (101) for guiding light transferred from the wavelength selection filter. The second optical system being opposingly arranged to the first optical system while interposing the wavelength selection filter therebetween;
- outer cylindrically shaped holders (120) for holding the optical filter, the first optical system and the second optical system secured thereto; and
- wherein each of the first and second optical systems comprising an inner holder (115 and 105, respectively) for holding the optical fiber holder and a lens (112 and 103, respectively). The inner holders being secured to the outer holder with a photo-curing adhesive.

Wherein the plurality of optical multi/demultiplexers are sequentially connected in series so as to connect the optical fiber for guiding light to be transferred from the wavelength section filter of the first optical system of a preceding sequentially connected optical multi/demultiplexer to an optical fiber, to thereby sequentially separate light of a certain bandwidth from an inputted light signal including light of different wavelengths and output the light of the certain bandwidth from the optical fiber of the second optical system.

APA discloses the instant claimed invention as described above except for the outer cylindrically shaped holder and the inner holder are made of glass material.

Art Unit: 2839

Zhu et al., figure 5, disclose an angled-axis fiber-optic couplers having a bridging sleeve (507) which is made of glass (column 5, lines 5 and 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify APA to have the outer holder and the inner holder, each made of glass material in order to have an alternative material to hold the optical fiber holder, the lens, the wavelength selection filter, the first and the second optical systems.

Regarding claims 2, 7 and 17, APA discloses each of the first and second optical systems comprising the lens (112, 103) optically connecting the wavelength selection fiber and the optical filter, respectively. The wavelength selection filter being secured to the lenses of the second optical system.

Regarding claims 3, 8 and 18, APA discloses each of the first and second optical systems comprising an optical fiber holder (114, 104) which having a through hole (Applicant's specification, page 1, lines 35 and 36) for receiving the optical fiber inserted therein.

Regarding claim 9, APA and Zhu et al. disclose the optical fiber holder having the through hole except for a rectangular through hole.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide APA's through hole to have a rectangular through hole, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955), in order to have alternative size for the through hole.

Regarding claims 13 and 22, APA discloses the lenses of the first and second optical systems are graded index lenses having a pitch not less than 0.2 and not larger than 0.25 (APA's specification, page 2, lines 16 and 17).

4. Claims 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA and Zhu et al. as applied to claims 6 and 16 above, and further in view of Pan (5,359,683).

APA and Zhu et al. disclose the fiber holder except for a glass fiber holder.

Pan, figure 3, discloses fibers 10 and 12 are sealed in a cylindrical glass ferrule (24, column 3, lines 39-40) which read on the optical fiber holder is made of glass. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide APA's fiber holder to have the glass ferrule as taught by Pan, in order to have an alternative material to hold the fibers.

Response to Arguments

5. Applicant's arguments with respect to claims 1-3, 5-19 and 21-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Tam T. Le whose telephone number is 571-272-2094. The examiner can normally be reached on 7:30-5:00.

Art Unit: 2839

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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T. Le